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GRADUATE SCHOOL

CONTINUING EDUCATION
FOR THE FEDERAL
COMMUNITY

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL EXPERIMENT STATION

Newsletter

JAN 20 1968

CALENDAR OF EVENTS

CURRENT SERIAL RECORDS

January 1968

January 20 - 27, 1968

Spring Registration - Evening Program

January 29, 1968

Classes begin - Evening Program

February 6, 1968

Monthly Faculty Luncheon -- A panel of Graduate School teachers discuss how they handle classroom problems.

We hope to have copies of our first faculty handbook for distribution to those who attend.

THE NATURE OF MODERN PHYSICAL SCIENCE

Dr. Sterling Hendricks, Chief Scientist, Mineral Nutrition Pioneering Laboratory, of USDA's Agricultural Research Service, charmed guests at our January faculty luncheon with a simplified, and personalized history of the development of science.

Pointing out the phenomenal control of nature we have developed in our day, he traced the course of scientific discovery from the days of the early Greeks. "Not until the 19th century," he noted, "did man have reasonable understanding of the 'elements' identified by the Greeks; earth, air, fire, and water."



"The first real advance in the conquest of nature," he said, "was the observations of Kepler, Copernicus, and Newton. Newton added the refinement of expressing laws of nature in mathematical terms. Priestly contributed another large advance concerning the laws on compression of gasses."

The 18th century saw the beginning of technology, with Watt's development of the steam engine.

Faraday and Maxwell, in the 19th century, advanced scientific knowledge with an understanding of the nature of electricity and magnetism, following which Edison came along with the dynamo and the light bulb.

Knowledge of chemistry, meanwhile, was growing along with that in the

physical sciences. The quantum theory of mathematics, developed by Einstein and others, was a huge advance.

While the nature of matter was under investigation in the latter part of the 19th century, the total increase in our knowledge in the last 50 years is greater than that in all the years preceding. But from the Greeks to the present, man has kept on in his quest for knowledge -- and he doubtless will continue to find new frontiers to explore.

PROVIDING QUALITY ENVIRONMENT IN OUR COMMUNITIES

Our fall lecture series was concluded last month with three outstanding speakers and equally distinguished panels of reactors. On December 13, Barry Commoner, Professor of Botany at Washington University, was the lecturer, while George L. Mehren, Assistant Secretary of Agriculture, and Philip R. Lee, Assistant Secretary of Health, Education and Welfare, served as reactors. Theodore C. Byerly, Administrator, Cooperative State Research Service, was moderator. Professor Commoner spoke on:

THE BALANCE OF NATURE

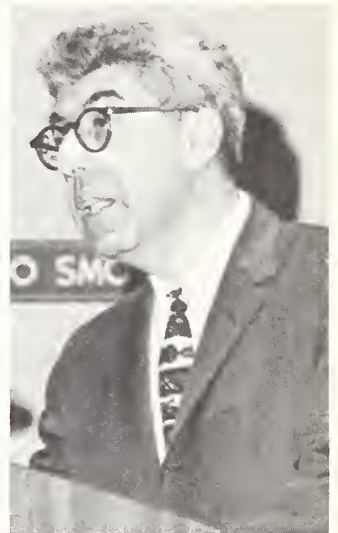
---Barry Commoner

"If the environment is to continue as a suitable place for human life it must be capable of accommodating itself to ... new stresses.

"The rapidly worsening situation in air and water pollution is evident.

"We have developed an enormous competence to intervene in the natural world; but at the same time we are unable to predict the full biological consequences of these intrusions. In the eager search for the benefits of modern science and technology we have become enticed into a nearly fatal illusion: that we have at last escaped from the dependence of man on the balance of nature; that we have made our own environment and no longer depend on the one provided by nature.

"The truth is tragically different. We have become, not less dependent on the balance of nature, but more dependent on it. Modern technology has so stressed the web of processes in the living environment as its most vulnerable points that there is little leeway left in the system. Unless we begin to match our technological power with a deeper understanding of the balance of nature we run the risk of destroying this planet as a suitable place for human habitation."



OF URBAN AND RURAL FORCES

--- Constantinos A. Doxiadis

On December 20, Constantinos A. Doxiadis, noted architect and planner, spoke at a morning session at which Harold F. Wise, Planning Consultant, and Donald M. Fraser, Congressman for Minnesota, were reactors. John A. Schnittker, Under Secretary of Agriculture, who was scheduled to moderate the session, was unable to attend at the last minute so I filled in, in that capacity.

Mr. Doxiadis pointed out that the real problems today are not those of design or architecture or community design, but are conceptual problems relating to the interplay of rural and urban forces.



"The physical limits of space will require eventually that we achieve a permanent balance," he said. He envisions that this will require a new type of city -- or a system of cities, with rural areas in between. To achieve this, the small cities of the past will grow and become a system of satellite cities around the larger cities. This development will be along the lines of transportation and around the esthetic features such as coast lines, beautiful valleys and so on.

"To achieve a balance of rural and urban forces," Mr. Doxiadis said, "we must be able to translate our wishes into a measurement system. Land values offer a way of measuring rural and urban balance at present, but they don't measure esthetic values, conservation, or public interest."

"We must change our notion of design separating rural and urban forces. We can't get along with the old 'central park' type of green space within the cities, but must have a merging of the rural and the urban in fringe areas."

"The last half of this century and the first part of the 21st will be a transitional period which, if we work at it, will achieve a balance of rural and urban forces."

RURAL RENAISSANCE

---Orville L. Freeman

At an afternoon session on December 20, Secretary of Agriculture, Orville L. Freeman was the speaker, and reactors were James Russell Wiggins, Editor of the Washington Post, and Ralph Widner of the Appalachian Regional Commission. Alfred L. Edwards, Deputy Assistant Secretary of Agriculture, was the moderator.

"I am an optimist," declared Secretary Freeman, "I do believe the Nation will decide to fashion the tools and allocate the resources for a renaissance



in rural America ..."

He quoted developer James Rouse as saying that this "doesn't require vast new programs, new knowledge, new technological understanding or concepts. It requires a frame of mind that we can make ourselves into what we want to be."

Secretary Freeman predicted that over the next 30 years "we will see the emergence of a rural, town, and country multi-county system as viable, prosperous and self-contained as the metropolitan complex is today.

"In public administration and services, there will be sharing of talent and resources across a community. General revenues of counties and municipalities in the area will be pooled to finance certain services such as transportation, health and welfare, higher education, and police protection.

"Most of the little towns and cross-roads villages that used to be self-contained economic centers will evolve into residential communities ...

"Commercial-sized family farms will be larger ... (but) small farming will not die out.

"I believe industrial and business development in these communities will accelerate.

"The shape of government, the content and influence of area-wide planning, relationships between town and country, modernizing public services, farm stability and industrial growth, education, and progress for the poor -- this is the higher ground that must be taken if 'rural renaissance' is to be more than a catch-phrase.


"... There is now an awareness and a movement toward these goals never before present in rural America, and this is one reason I am optimistic. I have seen these communities taking shape with my own eyes.

"All down the line -- from rural renewal to Resource Conservation and Development projects, more money is being invested, new ideas, new concepts are being tried. And you can see the results."

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GREAT DECISIONS PROGRAM

"Great Decisions", an 8-session study-discussion program, is designed by the Foreign Policy Association to develop informed opinion on world affairs. Channel 26 (WETA) will carry the program twice each week beginning February 4. Those interested in starting or joining a group of 10-30 persons may call the United Nations Association (NA8-8330) or 522-1078 for complete information. Study kits used by the groups are available at the Graduate School Bookstore for \$2.58.


Edmund N. Fulker
Acting Director.